AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-16. (Canceled)

17. (Amended) A multi-tone image recording apparatus comprising:

a photosensitive member which moves in a sub-scanning direction;

a laser optical system which selectively generates a laser beam and scans said photosensitive member with a spot of the laser beam in a main scanning direction substantially perpendicular to said sub-scanning direction;

a developing device which develops areas irradiated by the spot of the laser beam with developer;

a memory which stores a plurality of exposure patterns corresponding to a plurality of tone levels, respectively, each of said plurality of exposure patterns defining a number of irradiation by the spot of the laser beam and the positions of the irradiation within a specific range, at least two of said plurality of exposure patterns being identical in the number of the irradiation but different in the positions of the irradiation within said specific range for realizing different tone levels, wherein a size of the area developed by the developing device within said specific range is different for each tone level;

a controller which receives multi-tone image data representing a tone level of a multi-tone image and specifies one of said plurality of exposure patterns in response to the multi-tone image data; and

a driver which drives said laser optical system to control generation of the laser beam by reviewing the exposure pattern specified by said controller.

18. (Original) A multi-tone image recording apparatus as claimed in claim 17, wherein each of said plurality of exposure patterns is constituted by an m*n matrix of which each cell corresponds to the irradiation by the spot of the laser beam.

19. (Original) A multi-tone image recording apparatus as claimed in claim 17, wherein generation of the laser beam is controlled by pulse width modulation in the main scanning direction.

20. (Original) A multi-tone image processing method as claimed in claim 17, wherein all of the irradiations are of substantially the same intensity.

21. (Original) A multi-tone image recording apparatus as claimed in claim 17, wherein said laser optical system includes a semiconductor laser.

22. (Original) A multi-tone image recording apparatus as claimed in claim 21, wherein said driver switches on and off the semiconductor laser in correspondence with the exposure pattern specified by said controller.

23. (Original) A multi-tone image recording apparatus as claimed in claim 22, wherein said driver controls the intensity of the laser beam between three or more levels.

24. (Amended) A multi-tone image processing method comprising:

receiving a plurality of image data wherein each image data represents a tone level;

specifying a pattern from a plurality of patterns, each of said plurality of patterns defining a number of recording operations and positions of recording operations within a specific range, wherein each pattern represents a specific tone level and at least one of the patterns a has larger number of recording operations than another of the patterns that represents a [lighter] darker tone level within the specific range; and

generating recording data for executing recording operations by reviewing the pattern specified for each image data.

25 – 28. (Cancelled)

29. (New) A multi-tone image processing apparatus for converting multi-tone image data representing a tone level of a multi-tone image to binary image data, said apparatus comprising:

a memory which stores a plurality of patterns representing a plurality of tone levels, respectively, each of said plurality of patterns having effective cells and non-effective cells and defining a number of effective cells and positions of effective cells within a specific range, wherein at least one of the patterns has a larger number of effective cells than another of the patterns that represents a darker tone level within the specific range; and

a converter which specifies one of said plurality of patterns stored in said memory according to the tone level of the multi-tone image data to be converted and converts the multi-tone image data to the binary image data based on the specified pattern.

30. (New) A multi-tone image processing apparatus as claimed in claim 29, wherein each of said plurality of patterns is constituted by a matrix in which each element of an m*m square matrix is divided into k cells in a row directions.

31. (New) A multi-tone image recording apparatus comprising:

a memory which stores a plurality of patterns representing a plurality of tone levels, respectively, each of said plurality of patterns having effective cells and non-effective cells and defining a number of effective cells and positions of effective cells within a specific range, wherein at least one of the patterns has a larger number of effective cells than another of the patterns that represents a darker tone level within the specific range;

a converter which specifies one of said plurality of patterns stored in said memory according to the tone level of the multi-tone image data to be converted and converts the multi-tone image data to the binary image data based on the specified pattern; and

a printer which prints the image according to the binary image data converted by said converter.

32. (New) A multi-tone image recording apparatus as claimed in claim 31, wherein said converter includes an X-address counter, a Y-address counter and a Z-address counter, said Z-address counter specifying one of said patterns in the memory, and the X-address counter and the Y-address counter specifying one of said cells of the specified pattern according to horizontal and vertical printing operations of said printer.

33. (New) A multi-tone image recording apparatus as claimed in claim 31, wherein said printer includes a light source which emits a light beam, a driver which drives said light source based on the binary image data, an image carrier which moves in a vertical direction, and a deflector which deflects said light beam in a horizontal direction and scans said image carrier to form an image on said image carrier.

34. (New) A multi-tone image recording apparatus as claimed in claim 33, wherein said converter includes an X-address counter, a Y-address counter and a Z-address counter, said Z-address counter specifying one of said patterns in the memory, and the X-address counter and the Y-address counter specifying one of said cells of the specified pattern according to horizontal and vertical scanning operations of said printer.

35. (New) A multi-tone image recording apparatus for recording an image based on multi-tone image data representing tone levels on an image, said recording apparatus comprising:

a converter which converts multi-tone image data into recording data so that at least two tone levels are realized by differentiating positions of recording dots within a specific range while a lighter tone level has a larger number of recording dots than a darker tone level within the specific range; and

a printer which receives the recording data from said converter and records the recording dots based on the recording data.

36. (New) A multi-tone image recording apparatus as claimed in claim 35, wherein said printer includes a light source which emits a light beam, a driver which drives said light source based on the recording data, an image carrier which moves in a vertical direction, and a deflector which deflects said light beam in a horizontal direction and scans said image carrier to form an image on said image carrier.

37. (New) A multi-tone image recording apparatus as claimed in claim 17, wherein said size of the area developed by the developing device within said specific range varies depending upon the number of adjacent irradiations continuing in the main scanning direction within said specific range.

38. (New) A multi-tone image recording apparatus as claimed in claim 17, wherein said size of the area developed by the developing device within said specific range varies depending upon the number of adjacent irradiations continuing in the main scanning direction or the sub-scanning direction within said specific range.